Texas Instruments Personal Computer May 1981, No. 4

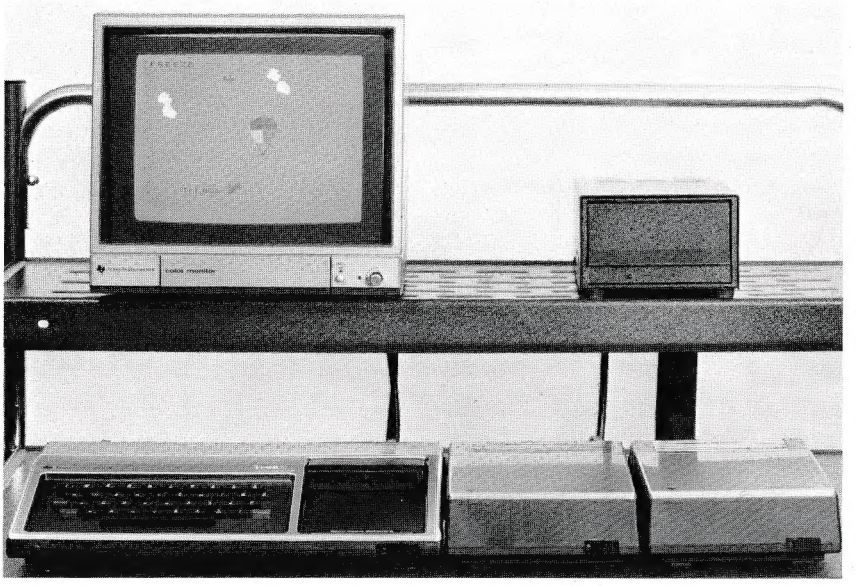
User's Newsletter

TI Now Offers LOGO Learning Package

Texas Instruments offers the opportunity to create a limitless learning environment for children with the TI LOGO *Solid State Software*™ Command Module and System Diskette. TI LOGO, derived from the LOGO language, is a computer language based on a philosophy of education developed by Professor Seymour Papert and the staff of the Artificial Intelligence Laboratory of the Massachusetts Institute of Technology (MIT).

The primary principle of LOGO is the creation of computer-based environments in which mathematics and other areas of "formal" learning can occur in a natural manner. TI LOGO, which was developed by Texas Instruments in conjunction with the MIT staff, is the first implementation of LOGO on a microcomputer system — the TI Personal Computer.

This child-appropriate computer language lets students of all levels of cognitive development communicate with the computer using an easy-to-understand language. This new concept, where the child initiates the degree of interaction with the computer, is an innovative approach to the use of computers as educational tools. The design of the TI LOGO language and the messages it gives encourage a child to create a borderless environment. Because a child defines the parameters of this learning world, it is personal and tailored to the individual's needs.



The exciting new TI LOGO *Solid State Software*™ Command Module and System Diskette create a limitless learning environment for students of all ages.

The Sprite, Tile, "Turtle Geometry," MAKESHAPE, and MAKECHARacter capabilities of TI LOGO encourage students to learn what a computer can and cannot do. With the help of "Turtle Graphics," students can learn a computational style of geometry by "acting out" the role of the Turtle. The commands for controlling the movement of the Turtle can be given one at a time, or put into a procedure and named. From this simplistic stage, a student can progress to more complicated designs.

For all students, even those with learning disabilities, TI LOGO serves as an unhurried guide to a world of animated shapes. The student creates and designs this world by using the computer's 32 sprites. Sprites can be used in simple procedures or advanced ones that actually test a situation. All procedures can be saved on a diskette or cassette tape and re-used when the student wants.

To fully utilize the features of TI LOGO, the TI Disk Memory System and Memory Expansion unit need to be attached to the system. Included in the TI LOGO package are the TI LOGO Command Module, program diskette, initialized work diskette, and a 92-page user's manual, which is a step-by-step guide through the language of TI LOGO.

Suggested retail price for TI LOGO (model number PHM 3040) is $299.95, and the package will be available in June, 1981.

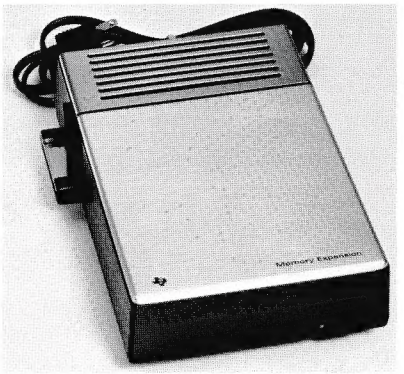
New Accessory Available for the TI-99/4

The Memory Expansion unit is a new accessory now available for the TI-99/4. The unit is designed to increase the memory capabilities of the Home Computer by adding 32K bytes of Random Access Memory (RAM) to the 16K bytes of RAM already in the computer. Thus, you can write larger and more sophisticated programs.

The Memory Expansion unit also increases the number of accessories which can be connected to the computer. With the expansion unit in place, four additional accessories can be connected to the right side of the unit.

Note that the Memory Expansion unit requires that the TI Extended BASIC *Solid State Software*™ Command Module or another specialized Command Module be inserted in the computer console. The TI BASIC computer language built into the computer cannot make use of the memory unit.

The suggested retail price of the Memory Expansion unit (Model Number PHP 2200) is $399.95.



The new Memory Expansion unit increases the memory and accessory capabilities of your TI-99/4 Home Computer.

TI Extended BASIC Command Module Now Being Offered

The TI Extended BASIC *Solid State Software*™ Command Module is now available for the TI-99/4. TI Extended BASIC is a powerful, high-level programming language, offering a variety of features not available in TI BASIC. Some of the features it offers are:

- Multiple statement lines — allows more than one statement on a line, saving both execution time and memory space.
- Expanded IF-THEN-ELSE — allows you to immediately execute a statement based on the results of the comparison instead of requiring you to branch to another line. Also provides more flexibility by letting you add AND, OR, XOR, and NOT to the comparison.
- Comments — accepts comments on the same line with a statement without requiring another line number.
- Multiple assignments — enables you to assign a value to more than one variable.
- SIZE command — tells you how much memory remains unused in your computer.
- Automatic load — can load and run programs automatically as soon as the computer is turned on.
- Expanded RUN command — lets you specify which program to run so that one diskette program can load and run another diskette program (program chaining).
- Expanded SAVE command — protects a program to prevent unauthorized listing, editing, or copying.
- MERGE statement — combines programs or subprograms stored on diskette into one program.
- LIST pause — stops and starts a program listing.
- Sprites — allows you to define up to 28 color graphics which move smoothly on the screen. Each sprite's definition can also include size, position, speed, and direction.
- Subprograms — lets you write subprograms with parameter lists and local variables.
- Error handling — allows you to determine the action taken if you have a minor error, a major error, or a breakpoint.
- DISPLAY and ACCEPT statements — enables you to display and input data at any position on the screen.
- Memory Expansion unit — utilizes the Memory Expansion unit to give you additional memory and accessory capabilities.
- Assembly language — supports the loading and running of TMS9900 Assembly language programs if the Memory Expansion unit is attached and turned on.

Suggested retail price for the TI Extended BASIC module (Model Number PHM 3026) is $99.95.

Users' Group Added to List

A local users' group is now active in Lubbock, Texas. This group and the others around the country are indispensable to those interested in sharing technical information, keeping up-to-date on hardware and software, and exchanging thoughts and ideas. For information about the new group, contact

Lubbock Computer Club
99/4 Users Group
Brett Pijan
2006 43rd St.
Lubbock, TX 79412
(806) 765-0102

The Personal Computer User's Newsletter is published by the Texas Instruments Personal Computer Division, P.O. Box 53, Lubbock, Texas 79408. All correspondence concerning this newsletter should be mailed to the above address.

ENTERTAINMENT SOFTWARE

The following is a current listing of entertainment packages for the TI-99/4 Home Computer.

	ACTION	*STRATEGY GAMES*	*PARTY GAMES*	*LOGICAL THINKING*	*MULTI-PLAYER*	*MEDIA*	*SOURCE*
3D STAR TREK		X		X		C	COLOR S/W
A-MAZE-ING	X				X	CM	TI
AIRMAIL PILOT	X	X				C	INSTANT S/W
BIBLE 1			X			D/C	USERS GROUP
BIBLE 2			X			D/C	USERS GROUP
BLACK-JACK (SPEECH)		X	X			D/C	USERS GROUP
BLACKJACK		X	X		X	C	COLOR S/W
BLACKJACK AND POKER		X	X		X	CM	TI
BLASTO*	X				X	CM	TI
BLUEGRASS SWEEPSTAKES			X			D/C	PEWTERWARE
BRIDGE BIDDING I				X		C	TI
CAMEL		X				D/C	USERS GROUP
CANNON			X			D/C	USERS GROUP
CAPTURE				X		D/C	USERS GROUP
CARS & CARCASSES	X					D/C	USERS GROUP
CIVIL WAR		X				D/C	USERS GROUP
CODE BREAKER				X		D/C	USERS GROUP
CONNECT FOUR*		X			X	CM	TI
CORNER BOUND	X	X				D/C	MICROCOMPUT
CRAPS		X	X			D/C	USERS GROUP
CRAZY LINES	X					D/C	USERS GROUP
DESERT		X				D/C	USERS GROUP
DRAW POKER		X				D/C	TI
ENGLISH TENNIS	X					D/C	USERS GROUP
FOOTBALL		X			X	CM	TI
GOLF		X			X	C	INSTANT S/W
GUESS PHRASE			X		X	D/C	USERS GROUP
HAMMURABI		X				D/C	USERS GROUP
HANGMAN				X	X	CM	TI
HUNT THE WUMPUS				X		CM	TI
HUSTLE*	X				X	CM	TI
INDIAN		X				D/C	USERS GROUP
INDOOR SOCCER	X				X	CM	TI
LANDING (SPEECH)	X					D/C	USERS GROUP
LUNAR LANDER	X					D/C	USERS GROUP
MARKET SIMULATION		X			X	D/C	TI
MASTER				X		D/C	USERS GROUP
MATCH WITS			X	X	X	D/C	PEWTERWARE
MIND CHALLENGERS				X		CM	TI
MIND MASTERS		X				C	IMAGE PRODS
MONSTER				X		D/C	USERS GROUP
MUGWAMPUS		X		X		D/C	USERS GROUP
MYSTERY MELODY			X	X		D/C	TI
NAB		X				D/C	USERS GROUP
NUMBER GUESS				X		D/C	USERS GROUP
OBSTACLE COURSE	X					D/C	USERS GROUP
OLDIES BUT GOODIES — GAMES I		X		X	X	D/C	TI
OLDIES BUT GOODIES — GAMES II				X	X	C	TI
PONY (SPEECH)	X					D/C	USERS GROUP
QUEST		X				D/C	USERS GROUP
REBOUND			X		X	D/C	USERS GROUP
ROAD RACE	X					D/C	USERS GROUP
SAILING	X					D/C	USERS GROUP
SANTA PARAVIA & FIUMACCIO		X	X		X	C	INSTANT S/W
SATURDAY NIGHT BINGO			X		X	D/C	TI
SCHMOO (OPTIONAL SP)	X					D/C	USERS GROUP
SEYMOUR THE MONSTER (SPEECH)				X		D/C	USERS GROUP
SHOOT OUT (SPEECH)	X					D/C	USERS GROUP
SIMON I	X					D/C	USERS GROUP
SKILL BUILDER I				X	X	C	IMAGE PRODS

*Trademark of Milton Bradley Company

(see ENTERTAINMENT SOFTWARE, page 4)

(ENTERTAINMENT SOFTWARE, cont'd)

	ACTION	*STRATEGY GAMES*	*PARTY GAMES*	*LOGICAL THINKING*	*MULTI-PLAYER*	*MEDIA*	*SOURCE*
SLOT MACHINE			X			D/C	USERS GROUP
STAR FIGHT	X					D/C	USERS GROUP
STARS				X		D/C	USERS GROUP
STARTREK		X	X			D/C	USERS GROUP
STRATEGY PACK I		X			X	C	IMAGE PRODS
T.I. WARS	X					D/C	USERS GROUP
TAROT CARDS			X			D/C	USERS GROUP
TAX COLLECTOR				X		D/C	USERS GROUP
THE ATTACK*	X					CM	TI
TI-TREK				X		D	TI
TIC-TAC-TOE		X			X	D/C	USERS GROUP
TOURING		X				D/C	USERS GROUP
TOURNAMENT BRICK BAT	X				X	C	IMAGE PRODS
U.F.O.		X				D/C	USERS GROUP
VIDEO CHESS		X		X		CM	TI
VIDEO GAMES I	X				X	CM	TI
WALL STREET CHALLENGE		X				C	IMAGE PRODS
WAMPUS		X		X		D/C	USERS GROUP
WAMPUS #2 (SPEECH)		X		X		D/C	USERS GROUP
WILDCATTING				X		C	IMAGE PRODS
WIZ		X			X	D/C	USERS GROUP
WORDSEARCH			X			D/C	USERS GROUP
YAHTZEE*		X			X	D/C	USERS GROUP
ZERO ZAP*				X	X	CM	TI

MEDIA: D = Diskette, C = Cassette, CM = Command Module

*Trademark of Milton Bradley Company

Non-TI products are listed here for your information. Their inclusion in this newsletter does not represent an endorsement by TI, and lists are not necessarily complete.

Early Reading Module Guides Children

Learning to read is a major achievement in a child's life, and the Early Reading *Solid State Software*™ Command Module is designed to guide your child in the first steps of learning to read.

The Early Reading module uses colorful pictures, stories, and sound to help your child experience the fun of reading. First, the module introduces vocabulary words which are then combined to form sentences. The sentences are then combined to form short stories, followed by simple comprehension questions. In this way, the child learns vocabulary, word recognition, and sentence comprehension.

The module is designed with speech capabilities, and the TI *Solid State Speech*™ Synthesizer accessory (sold separately) must be attached to your computer to use Early Reading. The speech synthesizer speaks the word or sentence as the monitor displays the written word and graphic image. This added feature of speech lets the child become totally involved in the learning experience.

After some first-time instruction, even young children will be able to work through most of the Early Reading activities on their own. They'll learn to operate the computer at the same time they're learning to read. This, in itself, is a valuable advantage for children today. Computers are becoming more prominent in all aspects of life, and the classroom is no exception. This module has been designed with that in mind. Early Reading can be used in schools as well as at home. Its activities can be used to help teachers and educators reinforce the reading concepts taught in the classroom.

Early Reading is the first in a series of modules called the Reading Skills Courseware Series. It was developed by the educational staff of Scott, Foresman and Company (a leading educational publisher) in cooperation with the staff of the Texas Instruments Learning Center. Suggested retail price for the Early Reading module (model number PHM 3015) is $54.95.

New Mobile Station Increases the Accessibility of Your Home Computer

Now you can easily move your TI-99/4 Home Computer from one room to another with the new Mobile Station manufactured by H. Wilson Co. Whether in the classroom or the home, this Mobile Station gives your TI-99/4 an enviable degree of accessibility.

Featuring equipment shelves of heavy guage steel, the unit has 1″ diameter legs made of chrome-plated steel tubing. Large 4″ diameter ball bearing swivel casters roll effortlessly over almost any surface for easy movement. In addition, the height of the work surfaces may be adjusted to accommodate your particular needs.

The Basic Mobile Station (model number C2436) includes a 24″×36″ fully adjustable brown baked-enamel work shelf, chrome-plated tubular steel legs, and 4″ ball-bearing swivel casters. It is priced at $129.00 with a shipping weight of 35 lbs.

The following is a list of accessories you can order to create a Mobile Station to fit your specific needs.

■ Monitor Shelf with Leg Extensions and Retaining Bar (model number C1236) — holds monitor, other equipment. 12″×36″ shelf, slotted for air circulation. Height adjusts. Price: $79.00. Shipping wt. 15 lbs.

■ Pedestal with Trays (model number CD0336) — keeps supplies and materials close at hand. Price $57.50. Shipping wt. 15 lbs.

■ Electrical Assembly (model number CTEA4) — has four grounded outlets, built in circuit breaker, on-off switch. Price: $29.00. Shipping wt. 3 lbs.

■ Electrical Assembly (model number CTEA6) — same as CTEA4, but with six grounded outlets. Price: $34.00. Shipping wt. 4 lbs.

The new Mobile Station for your TI-99/4 allows easy accessibility and movement from one room to another.

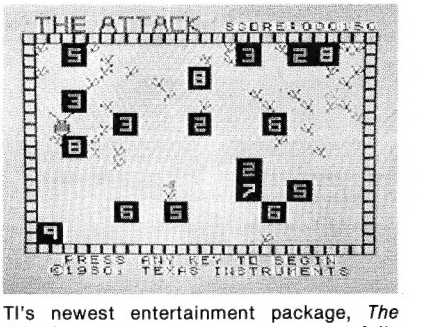
■ Wire Management Tray (model number CT0536) — provides a place to mount electrical assembly and tuck all the wires needed to power a modular system. Price: $49.00. Shipping wt. 12 lbs.

■ Monitor Security Mounts, set of four (model number CMM) — stabilizes and secures monitor. Price: $19.00. Shipping wt. 1 lb.

The Basic Mobile Station and its accessories can be assembled in minutes. All prices are F.O.B. South Holland, Illinois, and items will be shipped UPS. For more information on the Mobile Station, call or write:

H. Wilson Company
555 West Taft Drive
South Holland, Illinois 60473
Phone: (312) 339-5111

Test your strategy skills with *A-MAZE-ING*, TI's exciting new combination of maze games.



TI's newest entertainment package, *The Attack**, challenges you to successfully attack an onslaught of aliens.

*A trademark of Milton Bradley Co.

List of Software Packages Continues to Grow

Texas Instruments now adds three more software packages to the growing list of applications programs available for the TI-99/4.

Programming Aids III

The Programming Aids III package (model number PHD 5012) offers two programs to help you develop and edit programs written in TI BASIC or TI Extended BASIC. The Cross-Reference program prints a listing by line number for all variables, arrays, keywords, functions, and line number references in a program. The Editor program allows you to delete, move, or resequence line numbers within a program quickly.

The suggested retail price of Programming Aids III is $19.95. Diskette only, it requires the TI Disk Memory System (TI Disk Drive Controller and TI Disk Memory Drive) and the TI Extended BASIC Command Module. The TI Solid State Thermal Printer or the TI RS232 Interface and a compatible printer are required for the Cross-Reference program.

Saturday Night Bingo

Entertain your family and friends for hours with Saturday Night Bingo — a new, lively computerized form of your old favorite, Bingo. Let the computer randomly select the numbers to be called and read them aloud, or set the pace of the game yourself. A call list BINGO card is displayed on the screen with easy-to-follow playing instructions. In addition, with a printer attached to the computer, you can print Bingo cards and a call list.

The package is available on diskette at a suggested retail price of $29.95 or on cassette at a suggested retail price of $24.95. The diskette version (model number PHD 5025) requires the TI Disk Memory System (TI Disk Drive Controller and TI Disk Memory Drive.) The cassette-based version (model number PHT 6025) requires a cassette recorder and connecting cable. Both diskette and cassette require the TI Extended BASIC Command Module and the TI *Solid State Speech*™ Synthesizer. The TI Thermal Printer or the TI RS232 Interface and a compatible printer are optional.

Checkbook Manager

A new diskette program, Checkbook Manager (model number PHD 5021), features four easy-to-use programs that help you balance your checking account. The checkbook program allows you to record your checks and deposits with a maximum of 450 entries on your data file at one time. It recalculates your current balance with each new entry.

The Disk Sort program arranges your checking account entries in numerical order for fast, efficient processing, while the RAM Sort program allows you to assign an accounting number to a category and sort accordingly. You may then use the Account Summary program to total and display the entries you have assigned to each category accounting number.

The suggested retail price of Checkbook Manager is $19.95. Diskette only, it requires the TI Disk Memory System (TI Disk Drive Controller and TI Disk Memory Drive.) The TI Solid State Thermal Printer or the TI RS232 Interface with a compatible printer is required for the Disk Sort and Account Summary programs.

Random Bits

Editor's Note: This column presents suggestions and ideas for using the TI-99/4 Home Computer and its accessories. We would like to publish your programming problems, solutions, and ideas. Send letters to:

Personal Computer Newsletter
Texas Instruments Incorporated
P.O. Box 53
Lubbock, TX 79408
Attn: Editor

Faster Extended BASIC programs

If you have the Memory Expansion unit attached to your computer, you can increase the execution speed of your TI Extended BASIC programs. Simply include the statements

```
CALL INIT : : CALL LOAD [-31878, 0]
```

near the beginning of your program. These statements disable all sprite motion. To move sprites, change the 0 in the CALL LOAD statement to a number from 1 to 28, for the number of moving sprites with which you want to work. For example, the statement

```
CALL LOAD [-31878, 3]
```

allows Sprites 1, 2, and 3 to move. The CALL LOAD statement should be executed after any CALL DELSPRITE(ALL) statement and at the beginning of execution.

New Keyboard Overlay Available

The keyboard overlay with a blank "dummy" key which was announced in the February/March User's Newsletter is now available. The overlay, with a "blank" key to provide a "home" position for the little finger on your right hand, can be obtained through Consumer Relations. Call or write for yours today!

Consumer Relations

For information about new software, call Consumer Relations toll-free at 1-800-858-4565. In Texas, call 1-800-692-4279. Consumer Relations is open between 8 a.m. and 4:30 p.m. CST, Monday through Friday. You may wish to write them at this address:

Consumer Relations
Personal Computer
Texas Instruments Incorporated
P.O. Box 53
Lubbock, TX 79408